

Electronic Translators

CPYRGHT

Computers' Dilemma--- Big Words and Politics

By David Perlman
Chronicle Science Writer

Pity the poor electronic computer, struggling manfully to translate a science treatise from the Russian into English.

Not only does the machine need a difficult vocabulary of scientific terms, but it has to be politically sophisticated as well.

Yet despite this vexing difficulty, translation of scientific documents by computers

will be an accomplished fact in the immediate future, a national group of librarians was told here yesterday.

The advent of machine translation from such languages as Russian and Chinese will swell the already enormous total of scientific literature available to American researchers, an expert said.

The report came from Paul W. Howerton, deputy assistant director of the Central

Intelligence Agency, whose job is keeping tabs on technical information from all over the world.

He spoke at the national convention of the Special Libraries Association at the Sheraton-Palace Hotel.

Many research centers are now developing computer-based translation programs, Howerton said, and some of the programs are already functioning on trial runs.

The problem is extremely difficult, he said: Foreign words stored in the "memories" of computers may have many shades of meaning, and the varied structure of foreign languages adds to the complexity.

BORROWED WORDS

In Russian, for example, there are scientific words borrowed directly from other languages; and where the Russians are conducting more advanced research than anyone else they have coined scientific words that don't even exist yet in English.

Politics is a problem too, Howerton said, and a machine with a purely scientific vocabulary isn't smart enough.

In Soviet research reports, Howerton said, "terms are taken from the dialectics of Marxism-Leninism to show that the new research is not a departure from ideological precedent.

"The purpose is to forestall criticism by the party or political hacks who might cut off research funds or adversely affect the researcher's position and prestige in the Soviet scientific community.

SEMANTIC SHIFTS

"This necessity of constantly demonstrating the ideological correctness of new research involves semantic shifts and interpretation of scientific terms." All of this, obviously, makes life tough for a syntax-bound computer.

In another vein, the librarians were urged yesterday to stand fast against book censorship and to "take a public stand whenever necessary to champion ideas of individual liberty and social responsibility when they are threatened by racial bigots or political reactionaries."

REPOSITORY

This role for librarians was urged by Lawrence Clark Powell, dean of the School of Library Services at the University of California at Los Angeles.

Books, which can be "borrowed from public libraries and bought in supermarkets and drugstores," are the repository of America's "sacred ideas of freedom, tolerance and justice," Powell said.

The librarians' convention, attended by more than 800 experts from specialized libraries all over the country, ends Thursday.

CPYRGHT